

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

NEW SERIES.]

THURSDAY, APRIL 2, 1863.

[VOL. I.—No. 9.]

Original Communications.

REMARKS ON THE SUBJECT OF POPULATION, WITH ESPECIAL REFERENCE TO THE PROPORTION OF MALE AND FEMALE INDIVIDUALS. By Prof. FAYE, of Christiania, Norway.*

Translated from the Norwegian by D. F. LINCOLN, M.D., of Boston.

At a time when the question of woman's position in the community belongs to the order of the day, when efforts are making in many directions with the design of rendering her independent of others, by giving

her all possible inducement to help herself, it cannot be without interest to look a little more closely into the numerical proportions of the two sexes, as they exhibit themselves at the present time, and, having done this, to cast a glance at the conditions which lie at the foundations of the existing disproportion—so far as our knowledge of them reaches.

It is doubtless well known to many, that in the population of all countries, so far as known, the female sex preponderates in number; and in order to give a conception of this proportion at the present time, I will present some figures†:—

Austria, with a population of about 38,000,000,	has 104.5 females to 100 males.
Prussia, " " " " " 16,000,000,	" 100.4 " " " "
France " " " " " 36,000,000,	" 102.1 " " " "
Russia, " " " " " 68,000,000,	" 102.1 " " " "
England and Wales, " " " 27,000,000,	" 104.9 " " " "
Sweden,‡ " " " 3,859,728,	" 109 " " " "

It will be gathered from this, that there exists a not inconsiderable difference in the relative proportion; the more immediate reason for which it may certainly be of interest to know. Sweden is, in respect to the excessive number of females, less favorably situated than other countries, and this disproportion shows itself most sharply in the towns. Since we have the good fortune in Sweden to possess statistical data for 105 years, we have the means of making a comparison which covers a long time; and from the data referred to it is seen that the proportion of men in the entire country has been as 100 to 106 women; in the last five years, as 100 to 109. In the cities the proportion is 100 males to 116 females; therefore an excessive disproportion, surpassing that of London, where there live 100 males to 113 females. It lies in the nature of the case that such a disproportion cannot exist without more individuals of the male sex dying; and such in fact is the case, since

of the entire mortality in 105 years, 1000 deaths of males occurred to 984.9 of females. In the period 1856–60 the relative proportion was only 969.1 females to 1000 males. How far the emigration of men has any especial influence in producing this result, I am not aware.

Having premised these general observations, I will call attention to relations that are founded on a certain order of nature, and which seem designed to eliminate all disproportion. In consequence of the information which accurate censuses have given us, it may be regarded as an established fact, that in the whole number of living-born children the male sex is in excess. One of the latest authors, Wap-pæus§, has obtained the ratio for 58½ million persons, and has found it to be 106.33 living-born boys to 100 girls. It is self-evident that the present question can concern only countries with a certain degree of civilization, for our knowledge does not extend

* Nogle Bemærkninger om Befolkningsforholdene, med særligt Hensyn til Antallet af mandlige og kvindelige Individier; af Prof. Dr. FAYE. Stockholm, 1862.

† Compare Dr. Whitehead in Medical Times, September, 1862.

‡ According to the latest statistical report for the five years 1856–60,

§ Allgemeine Bevölkerungsstatistik, 1ter und 2ter Theil, 1861.

beyond these. Johann Peter Süssmilch* was probably the first who sought to prove that it is one of the most constant of natural laws, or beneficial arrangements, that on the large scale, in whole communities, more boys are born than girls, and in a ratio of 21 : 20 or 26 : 25=105 : 100 or 104 : 100—a proportion of males somewhat less than that assigned by the above statistics of Wappaeus. In order to bring out a ratio such as Wappaeus deduced, greater numbers than those of Süssmilch must always be employed as a basis of calculation, for variations in different countries, and still more in different districts or provinces, are quite great; they are even so considerable that some under certain circumstances have refused to entertain the idea of an unchangeable law of nature, comparable to the physical laws which can be studied and demonstrated with mathematical certainty. In solving this question it will be of interest to observe the proportions in many of the countries of Europe, and upon these I shall also offer a few data:—

For every 1000 girls—		
In Russia	there are born	1089 boys.
Lombardy	"	1075 "
Bohemia	"	1062 "
Belgium	"	1052 "
France	"	1058 "
Holland	"	1057 "
Saxony	"	1056 "
Denmark (1845-54)	"	1057 "
England	"	1050 "
Prussia	"	1048 "
Sweden (1850-55)	"	1050 "
" (1855-60)	"	1047 "
Norway (1826-35)	"	1062 "
" (1836-45)	"	1061 "
" (1846-55)	"	1057 "

It will seen that in Norway, which is favorably situated with regard to the excess of males, this excess has become less for each decennium since 1826.

In the North American Union it would seem as if the proportion were more favorable than in Europe, if we were to draw conclusions from statistical accounts for single years, but taken as a whole the difference is not great. In the State of Rhode Island, for instance, the proportion for the three years 1853-55 was 1064 boys to 1000 girls. It would be very interesting to know the proportion among the savage tribes, but we have no material whatever for deciding this question, just as we have no

data to guide us during the centuries before this in Europe.* A yet greater excess of males would exist if both sexes died in equal proportion in the womb and at birth. But here we meet the wonderful arrangement of nature, that proportionally many more individuals of the male sex are stillborn; some perishing while immature, others after attaining to viability. An idea of the difference in the mortality of the two sexes may be got from the fact, that for every 1000 stillborn female children there are from 1346 to 1449 of the male sex in various countries. In Norway, the proportion from the year 1850 to '58 was 1400 boys stillborn to 1000 girls. It will be easily seen that on a large scale so extraordinary a fatality among the males must exercise some considerable influence, although the number of stillborn children is not very great in itself, being about 1 in 20 or 30 of all births.

The causes of so great a proportionate mortality among males at birth, are not yet explained; and while the fact now stands as a law of nature, it is closely connected with another likewise inexplicable arrangement, in accordance with which the male sex again suffers loss. It should seem, at the first glance, as if many males were destined to die, in order to prevent the number of their sex from continuing excessive. But, if this be so, then the subsequent employments and mode of life among men, and their suspected want of vital stamina, have reversed the proportion, so that the preponderance remains after all on the female side.

Since, as I have stated, there are born living 106 males to every 100 females, we might have supposed that this excess would be kept up until the balance could be restored, at a later period, and that Nature's grand designs were accomplished, in this respect, in spite of the mortality among immature male fetuses. It is unquestionably true that this excess would powerfully contribute to eliminate all disproportion, if the males, when once born, were allowed to live in the same proportion as the females. But here, again, is found to exist a condition of things which human eyes cannot comprehend, since a proportionally larger number of male infants die in the course of the first year than of females. This mortality is such that, in England for instance, 126 boys die in the first year to 100 girls,

* Die Göttliche Ordnung in den Veränderungen des Menschlichen Geschlechtes, u. s. w. 4te Ausg. Berlin, 1796. 2ter Theil.

* In the 16th century, a well-known Spanish physician, "Stuart," stated that for every boy five or six girls were born; the incorrectness of which, however, was soon shown.

which proportion in France becomes still more unfavorable. In the second year, the mortality, though less excessive, is far greater on the male side, but subsequently becomes smaller, and at the age of 4 or 5 years is nearly equal for both sexes. In subsequent periods, from the age of 15 to 40, the mortality is something greater among the women, but the numbers cannot be made equal by this.

The excessive mortality among males in the first year, in all countries, is about as obscure in its causes as the mortality of that sex in the womb; for the explanations that are given, drawn from considerations of the size of males, and the consequent increased difficulty of birth, are by no means convincing. Some authors have been led to take the position that the male sex, which we like to call the stronger sex, is with respect to the inner organic vital force the weaker, and therefore succumbs more easily to all sorts of noxious influences. Finally, one fact deserves to be taken into account, and that is, that the excess of males among *illegitimate* children is less than among legitimate; which may assume considerable importance, especially in countries where marriages among the poor are forbidden, as in several of the German States. Exceptions from this rule are very few, and hold only for short periods—as in Denmark for ten years, and in England for three—but, as stated, our experience on the large scale amounts to this, that the number of boys is diminished among births outside of marriage.

After Süssmilch had demonstrated the rule which holds for large communities, that more boys are born than girls, it was natural for other observers to begin to study more closely this suspected law of nature, in order to educe its causes if possible. Since it is shown that the rule is not constant for smaller numbers of people, and may even be reversed, it would seem possible to trace the relations of causes in this instance. We will briefly glance at the efforts that have been made, in reference to their results.

In a work entitled "Ueber die Eigenschaften, welche sich bei Menschen und Thieren von Eltern auf die Nachkommen vererben u. s. w., 1828," Prof. Hofacker in Tübingen, along with many other interesting data, represented the relative age of parents as having especial influence upon the sex of children. Using as a starting point a remark of Aristotle, and some researches by Morel de Vindé in 1812 and 1813, with some later experiments by Giron de Buza-

reingues upon sheep breeding, Hofacker used the register of families in Tübingen for his researches. He made up from this a table of 2000 children, among whom the proportion was 107.5 boys to 100 girls. These 2000 children originated from 386 marriages, in 342 of which the father was older than the mother, and to these marriages were born 1273 children—684 boys and 589 girls = 117.8 : 100. In 27 marriages where ages were equal 147 children were born—70 boys and 75 girls = 92 : 100. In 117 marriages where ages were equal, 568 children were born—270 boys and 298 girls = 90.6 : 100.

Two statements made by priests in the environs of Tübingen gave like results, and this caused Hofacker to regard the age as the decisive circumstance.

Michael Thomas Sadler, who in 1830 published a larger work ("Law of Population," London), has given, in the fourth volume, a statement of 2068 children belonging to 381 fruitful first marriages among the English peerage. The proportion was 1005 males, 963 females = 114.7 males to 100 females:—

Husband the senior in 309 marriages—
929 boys, 765 girls = 121.4 : 100.
Ages the same in 18 marriages—
54 boys, 57 girls = 97.5 : 100.
Wife the senior in 54 marriages—
122 boys, 142 girls = 86.5 : 100.

Sadler thus regarded himself as justified in concluding that a natural law with reference to the influence of age was in operation in this case. The results of the investigations of these two men have since been spoken of as the "Hofacker-Sadler Law," and many have accepted it as certain and well proven; as, for instance, Prof. Leuckart in Wagner's *Handwörterbuch der Physiologie*, 4 Bd. The law may be formulized thus:—

1. Seniority on father's side gives excess of male offspring.
2. Equality in the parents' age gives slight preponderance of female offspring.
3. Seniority on mother's side gives excess of female offspring.

The numbers on which this conclusion is based are very small, though Sadler regarded them as sufficient; and later observations have shown that the proportion is not so constant as here represented.

In the year 1854, J. V. Güchert laid before the Academy of Science in Vienna* some investigations into the proportion of

* Sitzungsberichte der phil.-hist. Classe der kaiserl. Acad. d. Wissensch. B. xli.

the two sexes at birth. Göehlert undertook the laborious task of collecting data for a period of twenty-five years from the Gotha Genealogical Almanac, concerning princely families in most of the countries of Europe, taking care only to include first marriages. The result was as follows:—

953 marriages, 4584 living children, viz., 2351 boys, 2233 girls = 105·3 : 100.

1. Husband the senior—

2026 boys, 1862 girls = 1088 : 1000.

2. Ages the same—

263 boys, 282 girls = 932·6 : 1000.

3. Wife the senior—

71 boys, 80 girls = 825·6 : 1000.

Again a confirmation of the law, and with somewhat larger numbers.

In France, Legoyt, Chief of the statistical department in Paris, published in 1857 the result of some investigations in Strasbourg and Paris, which seem to point in the same direction; although in the first class the figures expressing the proportion are somewhat less (109 boys : 100 girls) than in the tables of Sadler and Süssmilch, and there is the additional difference that the two other classes show an excess of males (though in smaller amount; 107 : 100 and 101 : 100 respectively). Furthermore, Noirot has published some statistical studies for the arrondissement of Dijon, in which he sees a confirmation of the law, but unless there is some typographical error, his figures show a want of correspondence.

Finally, Boudin, in the beginning of the present year (1863), addressed a note to the Academy of Science in Paris "on the influence of age upon sex," in which he concludes that as a rule the husband's seniority produces an excess of males.

Other authors in very recent times have in part reached the result, that the so-called natural law above mentioned is not constant, and a single man—Dr. Stampe—has declared that there are born relatively more boys from marriages of elder women with younger men; he has likewise found that there are proportionally more boys born of illegitimate connection. Prof. Breslau, in Zürich, has also obtained for that single canton the result that the husband's juniority gives the greatest excess of males.* It is probably without doubt true that the age does not act as sole cause, and that we can hardly affirm that we have here before us a real law of nature, simple and unchangeable. For, in accordance with many obser-

vations, a certain natural force—dependent, it is true, within certain limits, upon difference of age—together with a not too frequent coitus, seem to exercise a quite noteworthy influence. This last deserves especially to be noticed as an explanation of the fact that poor people very often beget a greater excess of boys.

A few facts may be of interest, regarding the relative proportion in Sweden according to rank, as they are found stated in the newly-published statistical account for 1856-60:—The nobility exhibits a proportion of 971·3 males to 1000 females; the clergy, 108 to 100; the gentry, 105 to 100; the burgher-class, 104 to 100; the peasantry, 105·8 to 100; all other classes 103 to 100.

From this it is seen that, in the period mentioned, the nobility alone has had an excess of females, while all other classes show an excess of males, and the clergy in a higher degree than the rest, after which follows the peasantry. Statistics with very large numbers can easily be drawn up for Sweden, since we have had statistical returns here for a long time, and I have heard from my friend Berg, chief of the statistical bureau, that from 1860 we shall be able to give the relative difference in the parents' ages. I cannot avoid congratulating the country upon the possession of a man so zealous in his office as the present chief, and I am sure that the misunderstanding which so easily follows the increased demand for work upon the numerous officials scattered through the country, will in time change to gratitude for the benefits which well-used statistics may confer upon the community.

From the facts here brought forward, it would seem to result with some certainty, that a difference in the ages of parents is no inconsiderable cause of the difference of sex in offspring; but while many later observers have found variations from the rule so numerous that they should not be disregarded, it is certainly idle to attempt to deduce from our present stock of knowledge a "law of nature." I might give a number of statistical data, collected in the various bailiwicks of Norway, showing that in some districts, in a period of ten years, there has been a constant deficiency in boys, while in others the reverse has been the case. I cannot enter into these details; but I hope it will be admitted that a closer study of these relations in detail may by degrees contribute greatly to the solution of the question as to the causes of such a permanent predomance upon one side or the

* Zur Würdigung des Hofacker-Sadler's chen Gesetzes 2ter Beitrag in Monatsschrift f. Geburtskunde 22 B. 2 H. 1853. Breslau supports his conclusions upon 16,492 observations.

other. A single author, Dr. Ploss in Leipzig, has in two treatises presented many causes as contributing to the disproportion of the sexes, and has supported his own views by the investigations of well-known observers upon the proportions in the case of animals and plants. Thus, for example, he has given the quantity and the quality of the food; the elevation of the abode; the conditions of temperature; the parents' mode of life, rank, religious belief, frequency of coitus, &c., besides the age, and it is very possible that more causes come into the account; but in undertaking a thorough research it will be a great advantage if we can succeed in the first place in bringing proof of the more important relations of causes, since it will be easy by and by to take into consideration the more secondary circumstances. In making his entire investigation go to prove that woman is the stronger, and that this is the cause of the excess of girls, Dr. Ploss has been one-sided and untrue to nature; which Prof. Breslau, in Zürich, and Prof. Wappaeus, among others, have proved by facts.

The circumstance that after great wars, and sometimes epidemics, wherein a disproportionate number of men have died, more boys are born than usual, stands yet unexplained, since it may be used for the benefit of various theories; but doubtless a more exact investigation will throw light over this fact also. Another discovery, which informs us that men who pass a sedentary life, and especially scholars, who exhaust their nervous force to a great extent, beget proportionately more girls, may, if established for large numbers of people, certainly be studied more closely with advantage; for although it may be sure that the relative difference in ages has great importance, it may nevertheless be true that this has its limits, and that a very advanced age on the man's side, a weak organism, and especially too frequent coitus, diminish the number of males among the offspring. How far the proportion has changed in the last centuries as compared with an earlier time, it is impossible to know; perhaps more females are now living, perhaps not, but this thing is certain, that it is especially the tendency of our time to strive in various ways to make for woman an independent position in the community, just as the numerous foundations and legacies for the benefit of elderly unmarried females argue an increasing need of being cared for. The cause of this striving may in great part be found in the circumstance that woman's dignity is now coming more prominently

into view, in connection with or as consequence of a more or less justified belief that her position relative to man is a secondary one—although nature is suspected to have given her equal rights and equal facilities. Efforts for emancipation have doubtless full justification, where woman is oppressed, but whether this can be affirmed of our social relations is very doubtful. Where the laws lay no positive hindrance upon the development of woman in all directions in which she can and ought to exert herself—taking into account the social rank she may chance to occupy—there, as I think, everything has been done that can reasonably be required; for all artificial efforts to bring woman into life's most active and busy employments will probably in the long run fail, since she will come into collision with work that man on the whole can carry on better, more rapidly and more safely. It is seen marked out from childhood, long before any education has made its influence felt, that the natural inclination of women to the occupations of life takes a totally different direction from that of men, and this early hint ought not to be lost from view. If the study of nature could win its way to a more certain standpoint, with reference to the causes of the present excess of women, and the knowledge gained could gradually enter into the popular stock of ideas, this disproportion might disappear, and woman find her best fortune and most satisfying activity in a circle where she now feels herself most nearly at home. No one understands how to nurture the tender child so well as woman in her home, and it is a fact fully established by experience, that many a child that now dies in its first year—and especially many a male child—ought with good care to be saved.

We ought never to be short-sighted in bestowing help, nor to be carried forward by our zeal so far in an artificial fostering of the female sex that we shall perceive at last that we have been one-sided. But in order to see clearly we need before all else to make ourselves acquainted with the true reason for the existing disproportion, in ascertaining which we must have a comparative statistical account of marriages. The materials for this are certainly deficient for any period of time long antecedent to the present.

EIGHTY-THREE graduates received their medical degree at the late commencement of the University of Nashville, Tenn.

Hospital Reports.

MASSACHUSETTS GENERAL HOSPITAL.

Surgical Operations for the week ending February 29th.
Reported by MESSRS. RUFUS P. LINCOLN and
JOSIAH L. HALE, Jr.

1. *Hypospadias*. Dr. S. CABOT.—Patient is two years old. His brother, older, had fissure of hard and soft palate, extending forward as far as the teeth.

This was a very marked case of hypospadias, the external genital organs resembling those of a girl. The corpora cavernosa penis are wanting and the glans is drawn downwards, and almost concealed in the fissure of the scrotum, which is complete. The mucous membrane lining the fissure is continuous with the urethra. On either side a testicle can be felt in place. Owing to the position of the glans penis the urine cannot be passed free from the body, but runs down over the external genitals—and for this inconvenience relief is sought.

After etherization a Y-shaped incision was made and the mucous membrane carefully dissected from the fissure, which relieved the tension on the glans and allowed it to project. A transverse incision was then made crossing at the angle of the former. The two superior flaps so formed were flexed laterally, and the extremity of each attached near the base of the other, to form a posterior boundary for the urethra, and to this the mucous membrane was attached. The opposite edges of the fissure were united with sutures. These flaps were rendered prominent by the position of the superior flaps, forming a reservoir of loose tissue should any further operation be advisable.

The lines of incisions were then coated with collodium to protect them from the dribbling of urine, and a No. 5 elastic catheter was retained in the bladder. Water dressing.

The appearance of the parts was much improved by the operation—the glans penis being prominent and the scrotum undivided.

Patient did not recover fully from the effects of the operation. There was almost total loss of appetite, and vomiting usually followed the ingestion of food. He was drowsy, but started up frequently with fright. He became gradually more lethargic, the skin becoming purplish, and he died fifty-two hours after the operation. At the post-mortem examination nothing abnormal was found, and the wound was in a perfectly healthy condition.

2. *Lipoma of Thigh, excised*. Dr. S. CABOT.—The tumor, about 4 inches in diameter, was situated at the middle of anterior aspect of the thigh. It was lobulated, and presented the other characteristics of lipomata.

A semilunar incision was made at the outer side of its base, and the tumor was dissected from its attachments. Ligatures and sutures were applied, and the wound dressed with R. Acidi carbolici 3i., olei lini 3ss. M. q. s. on lint.

3. *Single Hare Lip*. Dr. H. J. BIGELOW.—Patient, æt. 6 weeks. There was a fissure of the lip on the left side extending into the nostril; the hard palate was not involved, but the alveolæ slightly, so that the intermaxillary of this side was slightly everted. The divided lip was freely dissected up and the margins of the fissure pared, and the tubercle being removed, the flaps were secured by silk sutures reinforced by a dumb-bell piece of adhesive plaster.

4. *Luxation of Elbow, reduced*. Dr. S. CABOT.—Patient fell and dislocated her elbow four months ago. Both bones of the fore-arm were displaced backwards on the humerus and flexed about one-fourth.

The fore-arm was forcibly flexed, extended and twisted on the arm until the adhesions were destroyed; and was then, with difficulty, drawn into place—the knee of the operator being placed in the bend of the elbow. The arm was placed at a right angle on an internal angular splint.

5. *Scirrhus of Breast, excised*. Dr. H. G. CLARK.—The tumor, about three inches in diameter, was situated above and to the outside of nipple. It was hard, and adherent. Had existed five months.

The tumor and mammary gland were included in an elliptical incision and removed. The tumor was found to be adherent to the pectoral muscle, a part of which was also removed. Ligatures, sutures and dry compresses.

6. *Tumor of Cheek, excised*. Dr. S. CABOT.—The tumor was hard, lobulated, about an inch long by half an inch wide, and was situated immediately below the zygomatic process of the malar bone. When patient opened her mouth the tumor was made quite prominent.

An incision was made parallel with Stenon's duct, and the tumor carefully dissected from its bed. One ligature, sutures; water dressing. Scarlatina appeared two days after the operation without known exposure.

7. *Talipes Equinus*. Dr. A. COOLIDGE.—Female, æt. 37. Following disease of the

ankle joint. The tendo-Achilles was divided subcutaneously.

8. *Needle extracted from Foot.* Dr. S. CABOT.—This patient, a man, while walking, drove a needle through his rubber boot into the sole of his foot. When the boot was removed, the needle was broken and about half remained buried in his foot.

Incisions were made crossing each other at point of entrance near the scaphoid bone, and after deep dissection the fragment of needle was found and removed.

9. *Blepharoplasty.* Dr. H. J. BIGELOW.—Male, æt. 52. Four years ago there appeared a lupoid ulcer on the left side of the nose near the eye, which extended until it occupied one-half the lower lid; by a partial cicatrization the remaining half was drawn inward towards the nose and everted. A deep granulating fissure occupied the neighborhood of the lachrymal duct. A narrow flap an inch and a half in length was taken from the forehead between the eye-brows, with a pedicle at the bridge of the nose. The remaining portion of the eye-lid was dissected into its place, and the edges of the granulating surface being refreshed, the flap was inserted into its new position and retained by fine sutures. The wound upon the forehead was now also completely drawn together by sutures.

10. *Rhinoplasty.* Dr. H. J. BIGELOW.—In this case, before operated upon by the Taliacotian method, a portion of the redundant pedicle was excised from one side of the bridge of the nose.

BOSTON CITY HOSPITAL.

Reported by F. C. RORER, M.D., Surgeon to Out-patients.

Fracture of Femur in the upper Third. (Service of Dr. CHEEVER.)—James K. æt. 56. Married. Rigger.—Dec. 19, 1867. About noon, to-day, while repairing a ship's bottom, fell, with the staging, on which he was standing, about fifteen feet, to the floor of the dock. Entered Hospital at 3, P. M. Ether was administered, and an examination made. Right femur was found to be fractured at the junction of its middle and upper thirds. There was great mobility of the upper fragment, and it was thought that crepitus was detected in the neighborhood of the trochanter major; though this was not certain. The examination was not as complete as could be desired, in consequence of an apparent inability, on the part of the patient, to bear the inhalation of ether. When only partially anesthetized, the pulse was noticed to be intermittent;

and at one time, it was not to be felt for three minutes. The ether was removed and $\frac{3}{4}$ ii. of brandy given per rectum. The pulse then came up. Ether was again tried; but, before relaxation occurred, the pulse once more became intermittent, and weak. Brandy $\frac{3}{4}$ i., with laudanum $\frac{3}{4}$ ss., were given per rectum. The respiration was not obstructed. The pulse continued to fall, and heaters were applied to the feet, legs, and thorax. An enema of $\frac{3}{4}$ i. of brandy with gr. x. of carbonate of ammonia was given. For about five minutes the pulse was either imperceptible, or extremely feeble. It then came up. About an hour elapsed before the patient was considered out of danger. The right olecranon process was found to be fractured, and separated about an inch. A long anterior splint was applied to the arm, and the leg put on a double-inclined plane.

7, P. M.—Has recovered from the effects of ether, and is comfortable.

Dec. 20.—Very comfortable. Slept three hours last night; position and length good.

23.—Extension was to-day made from the thigh in the direction of the axis of the femur, by means of a weight of eight pounds running over a pulley six feet from the floor. Extensive ecchymosis in upper part of thigh. Arm and shoulder more painful than leg. Elbow severely contused.

25.—Three quarters of an inch shortening, apparently. Position good—patient comfortable.

Jan. 1, 1868.—Since extension in the direction of the shaft of the femur has been practised, there has been no pain. One pound added to the extension weight. An external splint applied to thigh, from knee to hip, with pressure against the upper fragment. The whole limb has a tendency to rotate outward, which is controlled by sand bags.

6.—There appears to be a shortening of $\frac{3}{4}$ inch.

30.—Careful measurement shows a shortening of only $\frac{1}{4}$ — $\frac{1}{2}$ an inch. Union firm. Splint removed from arm. Position of olecranon good. Slight passive motion of elbow practised. On attempting to sit up finds himself very weak. Still remains in the Hospital.

REMARKS.—There are many ways of treating fractures of the thigh, and there can be no doubt that equally good results are sometimes attained by each method; but it is also a fact, that certain forms of apparatus and certain methods of treatment possess decided advantages over others. Among the many ways of treating fractures of the

thigh, may be enumerated that used in the case before us, known as the method of Dr. Nathan Smith, Senior; that of Dr. N. R. Smith, by the anterior suspensory apparatus; the old apparatus of Desault; the long external splint; the double inclined plane; and the long fracture-box; to which last we are disposed to give the preference, except in certain rare or complicated cases, when the particular exigencies presented to us must determine the plan to be pursued. The plan of Nathan Smith, Sen., has the advantage of using a weight for extension, and of not confining the leg and thigh in a straight line; which would reduce the apparatus to that known as the "single inclined plane," sometimes used in fractures of the patella, but very irksome to the patient. But Dr. Smith's apparatus possesses some (though not all) of the disadvantages of the double-inclined plane: the upper fragment is not firmly enough fixed; and unless the patient be very obedient, and great care exercised to avoid motion, an ununited fracture may occur; or, what is more probable, a projection in an anterior and outward direction at the point of fracture. It must, also, not be forgotten that a greater extending force, or a heavier weight, is required to produce any actual extension on the bone. But we must take into account the relaxation of the muscles by the double inclined plane, which would tend to compensate for the excessive weight required in this oblique position. Of course, the apparatus possesses an advantage in common with any form of double-inclined plane; viz., that in a case in which the upper fragment projects anteriorly with sufficient force to endanger the soft parts, the risk is diminished by flexing the thigh on the abdomen.

The suspensory apparatus of Dr. N. R. Smith of Baltimore, in certain cases, is very comfortable and effectual. It is particularly suited to transverse fractures, and to cases in which the soft parts on the posterior aspect of the thigh or leg have suffered injury.

The apparatus of Desault was formerly much used. It consists of a wide band round the abdomen, with a pocket to hold the end of the long external splint, which extends below the foot, and is provided with a movable block and screw, to which are attached the extending straps. There is also an inside splint reaching from this block nearly to the perinæum, and connected to the outer splint by means of a folded sheet. No extension, of course, is made by means of this splint. The counter-extension

is against the perinæum, by means of a padded strap, attached to the belt; thus avoiding pressure along the fold of the groin. The apparatus is simple, easily applied, not expensive, and tolerably comfortable and effectual. But the perineal strap is a great objection. It is always more or less painful, and may cause obstinate excoriations. It should have been stated, that in this, as in all other forms of apparatus, short splints should be applied to the thigh, to keep the fragments in apposition, and to prevent undue and irregular muscular action.

The "long external splint" has all the disadvantages of Desault's apparatus, except, perhaps, that it is more quickly applied and is cheaper; and is open to the additional objections, that the counter-extending force is made in a line intersecting that of extension, thus tending to draw the upper fragment outwards. The perineal strap, also, as stated above, comes pretty nearly in the flexure of the groin, and may thus cause pain or excoriation.

The "double-inclined plane" is, in our opinion, the least to be recommended of all the forms of apparatus enumerated. It is always unsteady, the thigh piece constantly getting displaced outwards, causing a projection of the fracture in that direction; and the extension (which is theoretically made by having the thigh-piece longer than the patient's thigh, thus *hooking* the leg, as it were, over the angle) results in discomfort to the patient, in oedema and neuralgia of the leg from pressure on the popliteal vessels and nerves; and probably, in such a displacement of the whole apparatus by the uncomfortable patient, as results in reducing the extension to nothing at all, and in causing a great prominence at the point of fracture. It is true, that in certain cases of more or less transverse fracture, situated near the condyles, a very good result may be attained; but even in these cases, we do not see what advantages this apparatus possesses over others.

In the case under consideration, there was great tendency to outward rotation. The long fracture-box differs from that used for fractures of the leg, only in the fact, that on the outside it extends to the crest of the ilium, on the inside to the perinæum, and posteriorly to the tuberosity of the ischium. If a weight be not used as extension, the inner side of the box may be hollowed out at its upper extremity, and the two horns, thus formed, connected by a well-padded strap, rather slack; which had better, however, extend back, towards the nates, and be attached, there, to the floor of the splint.

The perineum may now rest against this strap, while extension is made by a screw, similar to that used in Desault's apparatus. But in all cases a weight is by far the most advisable means of extension. It is very strange that this simple device should not sooner have come into general use. In our student days we *never* saw it used, until we once used it ourselves in 1860, in a case of fracture of both thighs, in a child. Desault's apparatus had been applied; but as the child was constantly urinating and defecating over the perineal straps, it soon became necessary to dispense with them. We then used a weight on each leg, with the most satisfactory results. In applying the long fracture-box (the sides of which should be made to let down) the fracture must be thoroughly reduced by the surgeon, and then immovably fixed in the box, by means of suitable padding, sand-bags, &c., and so held by assistants, till the weight is applied; the object of which, be it remembered, is *not to extend*, but simply to avoid losing what has been already gained in the above-mentioned thorough reduction. It is a great mistake to add to the extending-weight in order to produce a sort of dragging of the fragments into place. This should be accomplished *by the hands of the surgeon*; the proper padding of the splint and the accurate adjustment of the short thigh-splints, together with the weight, tend to *keep* the bones in place. But should any displacement occur, it must be corrected by the surgeon's hands, and not merely by adding to the weight; although of course, in any given case, it may be advisable to increase the weight *also*. And so, with Desault's apparatus, great discomfort to the patient is caused by a habit of some surgeons of frequently tightening the screw; it being forgotten that the object of the screw is *not to pull down* the fracture, but only to hold it, after it *has been* properly pulled down. It may not be out of place, also, to say, that the adhesive straps must extend *above the knee*. If placed below merely, and much extension be employed, the lateral ligament of the knee-joint may suffer such elongation as to result in permanent lameness.

There is only one class of cases, in our opinion, in which the long fracture-box may not be applicable; and in such cases, the apparatus of Desault is equally inapplicable. We refer to cases where the fracture occurs high up, is very oblique, and in which, in very muscular patients, the upper fragment presses forcibly forwards. But although a case might possibly occur, where

the double-inclined plane might be required, we have yet to see such a case, and are disposed to agree with Sir William Fergusson, in saying that even such apparently unpromising cases may yet, with a little perseverance, be safely and successfully treated in the horizontal position.

Reports of Medical Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.
CHARLES D. HOMANS, M.D., SECRETARY.

Nov. 25th.—*Inflammatory Destruction of Kidney*.—Dr. CABOT showed the specimen and gave the following account of the case.

"The patient, a wool sorter, aged 50 years, entered the Massachusetts General Hospital, Nov. 4th. He has been subject to attacks similar to the one for which he enters, more or less severe, for three years, and has kept his bed for the last month. He complains of persistent pain in the lumbar region, and a feeling of weakness; of some pain in the bladder and in the penis during micturition, starting from the perineum.

"Nov. 5th.—The urine was examined, and found to be normal; but, on microscopic examination, scales from the pelvis of the kidney and some pus globules were found.

"7th.—Had a chill, easily relieved by stimulants; says he has been subject to chills for twenty years. A sound, passed by Dr. Cabot, found the bladder contracted and thickened.

"8th.—Had another chill in the night, from which he did not rally, but became partially unconscious, complaining of general pain. He gradually sank away, notwithstanding the use of stimulants, and died in the afternoon.

"At the *post-mortem* examination, the right kidney was found so closely adherent to and blended with the surrounding tissues that it was difficult to detect its boundaries; the pelvis was, however, traced from the ureter. The kidney was adherent to the liver, to a loop of the small intestine, and to the ascending colon. Into its pelvis opened a series of cavities, representing dilated infundibula and calices, the mucous membrane, in part only remaining, being of a dark-slate color, and contrasting strongly with the pale lining membrane of the pelvis. A number of these cavities had a ragged, ulcerated look; and one,

about an inch and a half in diameter, and adherent by its outer wall to the liver, may or may not have been in the renal substance. What appeared to have been the kidney was four inches in length. The ureter was much thickened and dilated; midway between the pelvis of the kidney and bladder was an earthy, friable concretion embedded in ulceration, which surrounded the canal of the ureter. The mucous membrane of the ureter was generally of a grayish-white color. Muscular coat of bladder considerably hypertrophied; mucous membrane of trigone of a dark-slate color. The *left* kidney was $5\frac{1}{2}$ inches long, 3 inches wide, and weighed 12 oz.; it had rather a coarse appearance. A portion of the liver, to the depth of an inch, was in a sloughy state, and evidently formed part of the abscess at the point of adherence to the kidney."

Nov. 25th.—*Cancer of Liver; Induration of Skin and Subcutaneous Cellular Tissue of Chest, continuous with False Membrane in Pleural Cavity.*—Dr. ALLEN, of Cambridge, gave the following account of the case:—

"Miss N., unmarried, aged 57, had had ordinary health up to September, 1866. In May, 1867, I was called to visit her. She complained of a very severe and persistent cough, loss of appetite, inability to exercise, want of refreshing sleep, uneasiness in right chest, difficult respiration.

"On examining the chest, I found in right side bronchial respiration and total want of resonance. The right breast was flattened and indurated, and attached to subjacent tissues; the nipple and its areola retracted entirely out of sight, and discharging a serum which dried into yellow scabs. In the latter part of June, the left breast began to manifest the same disease. She had darting pain, as she had in the right breast, soon had retraction of the nipple, flattening of the breast—hard tubercles, which increased rapidly in size, running together and forming plates with an uneven surface—and soon the entire breast became indurated and adherent to the subjacent tissues.

"As early as the middle of July, the skin around the breast began to swell and to harden, the cuticle became soft in patches, and ruptured and discharged serum that dried into yellowish scabs. Tubercles appeared and became confluent, forming plates. This state of the skin apparently extended to the cellular and muscular tissues—spreading *slowly* downward to the gastric and hepatic region, but rapidly up-

ward over and into the pectoral muscles, and downward over the entire back. The cellular and muscular tissues above and below the clavicles, especially became indurated. The entire posterior surface of the body had the hardness and feeling of well-tanned cowhide.

"The odor from the diseased parts, especially from the softened and denuded patches, was very offensive, requiring deodorizers. Excrescences appeared here and there on the body.

"In September, the right arm became œdematous, very much enlarged, and in a few weeks very hard and exceedingly painful. Patches of cuticle softened, became denuded and discharged serum—and excrescences were formed, similar to those previously seen on the body, but higher and wider in form. No œdema of lower extremities occurred. The arm was the source of the severest pain, rendering necessary large doses of morphia. She felt, during the last three months of her life, as if her body, especially the chest, was enclosed in a coat of mail, or a metallic jacket, which was constantly growing smaller and smaller, compressing her chest more and more.

"A few years since, she lost a sister by cancer in utero, and several cousins of the first or second degree have died of cancer in some of its forms."

Dr. Ellis made the autopsy; the following is his report.

"Externally. The redness had nearly disappeared, and the small nodules so distinctly felt at the lower confines of the disease during life were scarcely perceptible. On reflecting the thoracic parietes it was found that all the soft parts had acquired a great increase of density, the skin, subcutaneous tissue and muscles being more or less blended, though at some points the separation between the skin and subjacent parts was distinguishable. The skin and subcutaneous tissue seemed merely dense, the pectoral and intercostal muscles were pale, firm, much atrophied and of a very light brown color. The change was so great that the pectoral muscles were hardly recognizable as such.

The right lung was universally and strongly adherent, the false membrane anteriorly appearing to be continuous with the increased fibrous tissue of the thoracic muscles on one side and the interlobular tissue of the lung on the other. The latter was evidently more prominent than usual, resembling to a limited extent the change seen in pleuro-pneumonia of cattle. Other portions of the lung œdematous, but firm.

The left pleural cavity contained three or four pints of serum by which the lower lobe was much compressed. Upper lobe normal. Scattered throughout the liver, and when superficial, visible through the capsule, were greyish-white nodules, from an eighth of an inch to an inch in diameter, but generally quite small. They all had reddish centres, and were firmer than the cancerous nodules usually found. A microscopic examination, however, showed that they were composed of large cells, with large nuclei and nucleoli, such as are found in well-marked cancerous growths.

Nothing was found in the dense skin and subcutaneous tissue but fibre.

The muscular fibres had lost their striæ and had a fatty, degenerated look.

The elevations upon the arm were composed of large epithelium scales.

It seemed evident that the only change in the skin and adjacent parts was atrophy, with an increase of fibrous tissue or a persistence of the latter after the softer parts had disappeared.

Dr. John Homans, Jr., assisted me at the autopsy, and made a most accurate microscopic examination of the parts. His report is as follows:—"November 18, 1867. The masses in the liver are cancerous; consisting of cells, either globular in form, with one or two large nuclei, or else of these globular cells which have become more or less elongated and fibro-plastic in appearance. There is no fatty degeneration in these cancerous nodules in the liver. The liver elsewhere is quite fatty. *Skin.* The "wart" growth on the arm consists of epithelial cells, large, and either flat or shrivelled. The specimens of skin consist mainly of elastic fibres, and many of the individual fibres are of very large size. The intercostal muscle contains no trace of striated muscular fibre, but only elastic fibres, and products of fatty degeneration. No malignant cells were found in the skin."

DEC. 9th.—*Enucleation of the Eye for Sympathetic Ophthalmia.*—Dr. ROBERT WILLARD showed the specimen, and gave the following history of the case:

A stout healthy man, æt. 26 years, while cutting iron on Nov. 20th, was struck by a fragment of it in the left eye, producing instantly entire blindness of that eye; followed a few days subsequently by sympathetic irritation and diminution of vision in the right eye. The left eye was removed, Dec. 2d. At the time of the operation, the cornea of the left eye was entirely clear, except at the nasal side where there was a cystoid cicatrix about one line in diameter,

and extending from it into the sclerotic a cicatrix about four lines in length. The iris was uninjured except under the cicatrix of the cornea to which it was attached. No trace of the fundus oculi or any red reflex was found with the ophthalmoscope.

On examining the eye after removal the lens was found intact, but the retina was separated throughout two-thirds of its extent, and a large effusion of blood beneath it—the choroid being much disorganized. Protruding into the vitreous chamber from the posterior portion of the eye was a piece of iron, three quarters of an inch long and a sixteenth of an inch in width, one end being firmly impacted in the sclerotic.

The symptoms in the right eye were entirely relieved by the operation.

Medical and Surgical Journal.

BOSTON: THURSDAY, APRIL 2, 1868.

ORTHOPÆDIC SURGERY.

THE term *orthopædia* applied to surgery—literally the rectifying by education—is defined to be the prevention and treatment of deformities. Formerly but little known and used, it has now grown into a great specialty, of which the work of Dr. Bauer* is the latest American exponent. This treatise is pretty evenly divided into three parts—the first being on the deformities of the feet, the second on those of the spine, and the third on diseases of the joints.

The first class are congenital; of the second and third, according to the author, fully ninety per cent. occur during the formative period—from 3 to 10 years of age. In his introductory chapter, he takes occasion to sustain and defend specialists from the animadversions of the medical profession. On this point there will, of course, always be two opinions.

We regret that the author cannot avoid one of the besetting sins of the class he espouses—that of criticizing all brother specialists. We can also readily pardon errors in style and finish, on account of the foreign origin of the writer; but we do

* Lectures on Orthopædic Surgery, delivered at the Brooklyn Medical and Surgical Institute, by Louis Bauer, M.D., M.R.C.S. Eng., Professor of Anatomy and Clinical Surgery, &c. New York: Wm. Wood & Co. 1868.

think that he deals too largely in technicalities, and uses too many long words. Of this, *Spondylitis*, *Kyphosis*, *Necro-biotic*, and *hypomochlion*, are sufficient examples. The last occurs in the following extraordinary sentence, in criticizing the apparatus of a brother specialist (p. 142) :—

"The upper part of the spinal brace comes in contact with the body, and works upon it as on hypomochlion, which of course cannot be borne."

We should think not, if the patient has any knowledge of the English language.

In explanation of a fine plate of the morbid appearances of a carious spine, the author states it as his opinion (p. 101, *et seq.*) that in this case there had been fracture of the body of a vertebra and subsequent caries. The carious cavities contained a cheesy-yellow, semi-solid material, which, on careful microscopic examination, proved to be, not tuberculous matter, but pus in a state of condensation and fatty degeneration. And he thinks that multilocular abscesses in the vertebral bodies are to be accounted for, because the purulent material expands up and down, between the dura mater and the posterior surface of the bodies of the vertebrae. In this case, it seems to us that the position and strength of the posterior common ligament are overlooked.

Dr. Bauer inclines to a suppurative or carious, rather than a purely tuberculous and scrofulous origin in many cases of angular curvature of the spine. He also thinks that by far the largest number of antero-posterior curvatures are engendered by traumatic injuries direct'y inflicted.

"It is rather strange that the occurrence of traumatic injuries to the spine by falls, twists, *contre-coup*, &c., has been generally slighted by surgeons, and their influence underrated as the cause of posterior curvature; whereas constitutional causes have been admitted with eager readiness. I can account for this singular disregard of traumatic injuries but in one way, namely, that their consequences ensue at so late a period as to admit of hardly any causal connection. And yet analogy and daily experience amply demonstrate that the affections of bones, cartilages, and tendinous structures are extremely tardy in their development, and that between cause and signal morbid effect many months may pass by

before the latter presents its gross and noticeable manifestations."

So, therefore, the author thinks it may come to pass that a healthy child may receive a fall or blow which will excite caries of the spine; and that angular curvature can usually be traced to some forgotten injury. On the other hand, the latest English authority, Mr. Holmes Coote,* inclines to the opposite view, and adheres to the old doctrines of Pott, Cooper and Brodie. We are disposed to think that a just mean may be found between such opposite opinions: that scrofula may be the *predisposing*, and a fall the *exciting* cause of angular curvature; that the injury determines the location of the morbid influence in the part struck; and that, had it not been for the constitutional taint, the injured parts would have been restored, without organic degeneration.

In one opinion we heartily agree with the author, namely, that "the very first therapeutic axiom in the treatment of joint diseases is *rest*, absolute and unconditional; and the next, proper position of the affected articulation." *Absolute rest* for a diseased spine we believe as essential as for a diseased joint, or a broken bone. That rest, in angular curvature, can only be secured in the horizontal position. And no apparatus has yet been devised (we have seen and tried almost all) which is tolerable to a child, and which relieves the spine of the weight of the head. He figures and describes his wire splints, which he claims to be superior to and different from those of Bonnet.

He is an advocate of myotomy, more than of simple extension, as follows:

"1st. Extension cannot part inflamed articular surfaces.

2d. Powerful extension is, perhaps, the promptest remedy against ephemeral muscular spasm; but cannot be relied on in persistent spasm.

3d. In many instances, extension will not only fail to relieve the spasms, but will react unfavorably upon the violence of the joint disease.

4th. The division of the contracted muscle is the surest and unfailing remedy."

We have had no experience in myotomy,

* "On Joint Diseases," London, 1867.

but a very considerable one in extension. And it has always seemed to us that the toleration of and relief from extension was proportionate to the absence of suppuration in the joint; that where there was abscess forming, extension gave no relief, but in the opposite state very great relief.

Dr. Bauer advocates the puncture of diseased joints, if the effusion is progressive and the distention is very painful; and the opening of articular cavities by free incisions, when progressive suppuration of the internal articular surface exists, and threatens disruption of the capsule. (Vide pp. 292-3.)

Mr. Holmes Coote, on the other hand, is strongly opposed to such interference. Dr. Bauer very frankly narrates a case of his own, of ankylosis of the knee, treated by forced extension, in which the epiphysis of the femur was separated by the force employed.

We have no space to pursue our author further. His work is fairly illustrated, and we can commend it as an interesting addition to contemporaneous American medical literature.

HARVARD DENTAL SCHOOL.—We are glad to hear that the Faculty of this School has been organized by the choice of N. C. Keep, M.D., as Dean. All the professorships but one have been filled. The chairs of three, viz., Anatomy, Surgery and Chemistry, are held by the well-known teachers, Drs. O. W. Holmes, H. J. Bigelow and John Bacon. Of those for special instruction in dentistry, two are filled by the eminent dentists, Drs. N. C. Keep and Daniel Harwood. The third one, viz., that on Mechanical Dentistry, remains yet vacant. It is hoped that this will soon be filled, and that the school will be in operation next fall. †

We take pleasure in calling the attention of our readers to the new journal, *Archives de Physiologie*, edited by Dr. Brown-Séquard, and to be published every two months in Paris. The first number has just reached us.

DR. GEORGE H. GAY, of this city, sailed for Havana last week, to be absent about a month.

PREVALENT DISEASES IN EUROPEAN CITIES IN 1866.—Dr. Vacher, the well-known French medical statist and journalist, Editor of the *Gazette Médicale*, has just published his second annual medico-statistical essay on the mortality of Paris, London, and other cities.

* * * The intrinsic interest of the subjects treated can hardly fail of due appreciation by our readers; and, as regards the mode of treatment, we may remark that Dr. Vacher's essay is stamped with the approval of a jury of the Faculty of Medicine in Paris. * * *

The dominant fact in the medical history of 1866 is the prevalence of cholera, whose victims in Europe could not have fallen short of 200,000. The epidemic began in Paris in September, 1865, and, continuing to rage during the last months of that year, made its effects severely felt in the opening of 1866. Dr. Vacher states that, when cholera first broke out, typhoid fever and smallpox were the ruling diseases, and these not only continued with unabated force during the reign of cholera, but their intensity was greatly augmented, and they prevailed long after the cholera had disappeared.

The beginning of the first quarter of 1866 was marked in Paris by the presence of a declining epidemic of cholera, and by epidemics of smallpox and typhoid fever, then in their full virulence. The deaths from smallpox in the quarter were 291 in Paris, 245 in London, and 107 in Vienna. In the month of January, 131 deaths resulted from typhoid fever in Paris, 44 of these occurring in the hospitals out of 170 cases treated; the high rate of fatality (1 in 4) showing that the disease had taken the ataxo-dynamic form. Some cases of cerebro-spinal typhoid fever were also observed. In February and March the number of *typhoïsants* declined, and the fatality in hospitals fell off from 25 to 15 per cent. Puerperal fever carried off, during February, many victims; in the Hospice de la Maternité, out of 74 accouchements, 30 deaths occurred from metro-peritonitis. Dr. Vacher remarks, in reference to this great mortality, that, during all the month of February, the atmospheric conditions were identical with those he had before observed to be coincident with epidemics of puerperal fever; and to those who attribute these epidemics to cold, it is answered that, in dry and cold weather, they never prevail. In London, scarlatina and typhoid fever; in Vienna, smallpox, croup, and puerperal fever, prevailed during the first or winter quarter of 1866.

In the succeeding spring quarter, influ-

enza and measles in Paris, measles in London, scarlatina and typhoid fever in Vienna, respiratory affections in Brussels, were the reigning diseases. Complete saturation being represented by 100, the mean humidity of the atmosphere was 76 in London, 62 in Vienna, 56 in Brussels, and 44 in Paris; taking the mean humidity throughout the entire year, the cities preserve the same order, Paris having the driest, and London the dampest air. The influenza epidemic, which begun in Paris during March, attacked, it is said, more than a fourth part of the inhabitants of the city; and, in corroboration of the surmise that a dominant disease generally impresses somewhat of its character on the secondary diseases prevailing contemporaneously, it is stated that the influence of influenza was evident in the bronchial characteristics of the cases of measles occurring in March and April, as well as in pneumonia amongst old people. To this complication, in fact, is attributed the increased mortality of the last-mentioned disease. In 412 deaths from pneumonia in March, 160 (or 40 per cent.) were of persons over sixty years of age; in April the proportion was 39 per cent.; the mean mortality at this advanced age for the whole year being only 34 per cent. Influenza, itself, though it attacked so large a number of persons, was rarely fatal; differing altogether in this respect from measles, which raged epidemically during March, April, May and June, destroying a great number of lives of infants and many of adults. A third part of the whole mortality from measles occurred in two contiguous arrondissements (11th and 20th) whose bad hygienic condition renders them always a hot-bed of epidemics; other parts of the capital were almost entirely free from the disease. The mortality from measles was raised to a great extent by the bronchial complications before referred to; and another noteworthy circumstance was the occurrence of several fatal cases of *rougeoles anormales*, in which the eruptions were either tardy or incomplete, or altogether masked by ecchymoses, uncomplicated with any respiratory affection. * * * Measles was not less fatal in London than in Paris, causing 1383 deaths in the winter and spring quarters; and it is remarked that if Paris has its unhealthy Faubourg St. Antoine, we have also our foci of epidemic diseases—"the populous and badly ventilated districts of East London." At Brussels and Vienna only a few sporadic cases of measles occurred. The effects of the sudden transitions of temperature in March and April are seen in the

great mortality from acute diseases of the lungs, and also from phthisis, equally in Vienna, London and Paris. * * *

In the summer months of 1866, the reigning disease in Paris, London, Vienna and Brussels, was cholera; there was considerably more moisture in the air than in the previous quarter, the temperature, of course, being higher.

Dr. Vacher enters at some length into the etiology and treatment of cholera, but the only point to which we shall now refer is the effect ascribed to the epidemic in modifying, or impressing its characteristics on, other prevalent forms of disease. This modification was especially observable in typhoid fever, smallpox, phthisis, articular rheumatism, and in puerperal states. * * * So far as these results (taken from hospital practice) go, they show that cholera is not more fatal to puerperics than to persons in ordinary health (about 60 per cent.), while in pregnant women attacked, the mortality is much greater (82 per cent.).

In the autumn of 1866, cholera, measles, smallpox and typhoid fever were all declining in Paris; scarlatina prevailed in London; cholera in Vienna and Brussels. The cholera epidemic disappeared from Paris about the end of October, but there were sporadic cases in November and December. Dr. Vacher combats the notion that the last cases of the epidemic were less grave than at its first outbreak; he maintains, in fact, that the lethality of the disease does not diminish because the frequency of its attacks diminishes; and, as reliable statistics on this head are wanting both in Paris and London, he considers that the observations which have been made in Stockholm, Naples, Holland and Belgium, supply the only evidence either way, and that goes to prove that the last cases are the most virulent. * * *

Taking a general survey of the mortality of 1866, it is found that the death-ratio in Paris was 1 in 38.2 inhabitants; in London, 1 in 37.9; in Vienna, 1 in 28; in Brussels, 1 in 25.5; in Berlin, 1 in 24.3. A fact worth noting has reference to the distribution of phthisis, which in Vienna caused 1 out of every 4 deaths, 1 in 6 in Paris, 1 out of 8 in London, 1 in 9 at Berlin, 1 in 10 at Brussels, and 1 in 17 in Stockholm. A fourth part of the aggregate mortality in all these cities is caused by diseases of the respiratory organs.—*London Lancet*.

DR. SAMUEL A. GREEN, of this city, has been chosen one of the Trustees of the Public Library.

DURING the past autumn and winter, a trial was made at the out-door department of Bellevue Hospital of the Iodized Cod-Liver Oil, prepared by Mr. Fougere of William Street, with the view to ascertain whether or not this oil possessed any advantages over the ordinary uncombined cod-liver oils. Before giving the results it is fair to say that no other kind of practice presents so few facilities for forming a decided opinion of the merits and efficacy of any medicine as that of a dispensary. In a hospital the physician has the assurance that his directions in regard to the administration of the medicine will be faithfully carried out, and has moreover generally an opportunity of observing the result. In private practice also he has this latter advantage, though not always the former. In a dispensary practice he has neither. The medicine may or may not be properly administered. If the patient recovers he generally thinks it unnecessary to come back to report his cure: if he thinks he is not improving he will probably change to some other dispensary, and the case is lost. An opinion must be formed from the few cases that continue under treatment throughout the case, or by observing whether the patient had improved from visit to visit, though the cure was yet incomplete. The advantages claimed for Mr. Fougere's cod-liver oil, are that by reason of the addition of iodine, bromine, and phosphorus, it is more efficacious, and at the same time the stomach need not be disordered by an excessive amount of oil administered. This oil was given to about eighty patients, about thirty of whom were children, the remainder belonging chiefly to the department of chest diseases. Owing to the difficulties above mentioned, no statistical account of the result can be given; but the opinion of the physicians using it is nearly unanimous to this effect: that the oil is of decided medicinal value; that compared with ordinary cod-liver oil, it appears to take effect more rapidly; and that it obviates the very common necessity of adding extemporaneously to the oil, medicines containing iodine or iron, particularly the syrup of the iodide of iron. In private practice, where the price of the article used is not of much importance, it would be worth while to give this preparation a trial.—*N. Y. Med. Gaz.*

EFFECTS OF DILUTION ON VACCINE VIRUS.—The Union Médicale gives the following as the results of experiments made by M. Chauveau of Lyons, and presented to the

French Academy of Sciences by Claude Bernard. "If this virus is diluted in fifteen times its weight of water its properties are not at all altered; in fifteen to fifty times its weight of water the virus, inoculated with the lancet, still gives constant results; on greater dilutions the inoculations may succeed, but rarely. Still, the virus thus diluted, when it is injected into the veins, causes artificial cow-pox. M. Chauveau has injected in this way, in a horse, vaccine virus diluted with four hundred times its weight of water, and has seen all the symptoms of horse-pox produced." M. Pasteur considered that this difference between the results of inoculation and injection was owing to the fact that the oxygen of the water destroyed the activity of the fermentable elements, but when they were injected into the veins, the red globules removed again the oxygen and restored their vitality. M. Bernard offered a simpler explanation, viz.: that when the dilution was great, the elements of the virus, widely separated by the water, were not taken up on the point of the lancet.

TEMPORARY BLINDNESS IN SCARLATINA AND TYPHUS.—Dr. Ebert related to the Berlin Medical Society a case of typhus and three cases of nephritic scarlatina, in which complete blindness suddenly occurred, vision being completely restored in a day or two. He believes it to be dependent upon temporary interstitial oedema of the intra-cranial portion of the nerve, consequent upon impoverished condition of the blood. The conclusions he comes to are:—1. There are cases of acute disease accompanied by blood poisoning and blood impoverishment, in which the sense of sight is temporarily abolished. 2. The blindness lasts from twenty to sixty hours, and appears never to exceed three days. 3. These cases admit of a very favorable prognosis. 4. When the ophthalmoscope shows the retina to be intact, we may promise with confidence that the blindness will cease in two or three days.

Professor von Graefe observed that the true ground of so favorable a prognosis in these cases is to be found in the fact that, in spite of the absolute blindness, the pupil still continues sensible to the action of light. The negative ophthalmoscopic appearances alone do not suffice, for weeks may elapse without any change being apparent in cases which eventually exhibit plainly atrophy of the papilla.—*Med. Times and Gaz.*

Selections and Medical Items.

EVERSION OF THE SACculus LARYNGIS.—The specimen was exhibited to the London Pathological Society; it was the larynx of a patient who died at Guy's Hospital of cancer of the stomach. He had been a naval schoolmaster, and was a man of great acquirements. He lay long in the Hospital, and conversations with him were frequent, because his case was obscure, and he was much more able to give an intelligent account of himself than the average of the patients. Nevertheless, it was not noticed that his voice was remarkable in any way. Dr. Moxon often spoke with him, and his voice was always such as not to attract attention. It was then with some surprise that on inspecting his body he found the appearance shown in the preparation. There is what, at first sight, appears to be a tumor hanging down over one of the vocal cords; it is semi-elliptical in shape, and it is rooted above in the anterior half of the ventricle of the larynx. On examining the tumor, Dr. Moxon found that it could easily be put up into the usual position of the sacculus of the larynx; that when so placed—the tumor inverted and returned behind the false vocal cord—it appeared as the sacculus laryngis, while without it there was no sacculus laryngis at all, so that there could be no doubt that it is an everted sacculus. When so replaced, it very easily fell out of its position again, and reappeared, as it is now seen, a pendulous laryngeal tumor, very tempting to one skilled in the removal of laryngeal polypi.—*Med. T. & G.*

PARALYSIS OF SOFT PALATE FROM BROMIDE OF POTASSIUM.—In a discussion on the employment of bromide of potash in epilepsy in the Society of Practical Medicine at Paris, reported in *l'Union Médicale*, M. Mesnet referred to this symptom as an evidence that saturation of the system by the drug had been reached. He commences by giving some 20 to 40 grs. during the day, increasing the dose. He says, "we soon obtain certain effects which indicate that we must not push it farther. The mucous membrane of the pharynx and of the veil of the palate becomes insensible. The finger passed over these parts excites no muscular contraction. There is no effort at vomiting or sneezing, and no lachrymation. The drug then ought to exercise its curative action." He also gives a case in which this paralysis was produced after gradual increase of the dose to 130 grs. per diem.

As this statement seems to have excited no comment from the other gentlemen who took part in the discussion, it would appear as if the symptom was not new to them. Certainly this salt has been given, not infrequently, in still larger doses in this country, and we do not remember ever to have seen any such result of its administration reported.

A SIMPLE METHOD OF PROTECTING WATER FROM THE ACTION OF LEAD PIPE.—*Dingler's Polytechnisches Journal* publishes a simple method, brought forward by Dr. Schwarz, of Breslau, for preventing the poisonous influence of lead pipes on water, by forming on the inside surface of the pipes an insoluble sulphuret of lead, which has proved so effective that, after simple distillation, no trace of lead can be detected in water which

has remained in the pipes for a long time. The operation, which is a very simple one, consists in filling the pipes with a warm and concentrated solution of sulphuret of potassium or sodium; the solution is left in contact with the lead for about fifteen minutes. Commonly, a solution of sulphur in caustic soda will answer the purpose, and produce practically the same results. It is known that sulphuret of lead is the most insoluble of all compounds of lead, and nature itself presents an example which justifies the theory of Dr. Schwarz, since water extracted from the mine of Galena does not contain lead, a fact which has often occasioned surprise.—*New York Medical Gazette.*

SUB-LUXATION OF BODY OF STERNUM, producing a depression of over half an inch at the lower part of the manubrium, was reduced by Dr. M. Foster, of Shomdale, Ontario Co., as follows: He threw the head and shoulders backward, so as to draw the clavicles upward, and produced tension of the pectoral muscles, so as to draw them outward, and then by repeated deep inspirations succeeded in forcing the manubrium upward and outward.—*Am. Jour. Med. Sciences.*

MEDICAL DIARY OF THE WEEK.

MONDAY, 8 A.M., Massachusetts General Hospital, Med. Clinic; 9 A.M., Medical Lecture. 9 A.M., City Hospital, Ophthalmic Clinic.

TUESDAY, 9 A.M., City Hospital, Medical Clinic; 10 A.M., Medical Lecture. 9 to 11 A.M., Boston Dispensary. 10-11 A.M., Massachusetts Eye and Ear Infirmary.

WEDNESDAY, 10 A.M., Massachusetts General Hospital, Surgical Visit. 11 A.M., OPERATIONS.

THURSDAY, 11 A.M., Massachusetts General Hospital, Clinical Surgical Lecture.

FRIDAY, 9 A.M., City Hospital, Ophthalmic Clinic; 10 A.M., Surgical Visit; 11 A.M., OPERATIONS. 9 to 11 A.M., Boston Dispensary.

SATURDAY, 10 A.M., Massachusetts General Hospital, Surgical Visit; 11 A.M., OPERATIONS.

A Bulletin of Expected Operations, in both the Hospitals, will be found, weekly, at the office of the Boston Medical and Surgical Journal, and at Messrs. Codman & Shurtleff's, 13 and 15 Tremont Street.

TO CORRESPONDENTS.—Communications accepted.—Case of Rupture of the Uterus.—Report on Cases of Pneumonia.

PAMPHLETS RECEIVED.—Chart of Venereal Diseases. By Philippe Ricord, Newark, N. J.—Tenth Annual Report of the Medical Superintendent of the Provincial Hospital for the Insane, Halifax, Nova Scotia.—The Missequoi Springs and their Wonderful Cures.

MARRIED.—In this city, 26th ult., James A. Dow, M.D., to Miss Alice L. Lincoln, both of West Windsor, Vt.

DEATHS IN BOSTON for the week ending Saturday noon, March 28th, 1868, 111. Males, 61—Females, 50. Accident, 1—apoplexy, 2—disease of the bowels, 1—inflammation of the bowels, 2—congestion of the brain, 2—disease of the brain, 1—inflammation of the brain, 2—Ironchitis, 2—cancer, 1—cholera infantum, 1—consumption, 15—convulsions, 2—croup, 3—cyanosis, 2—diarrhea, 1—dropsy, 1—dropsy of the brain, 7—drowned, 1—erysipelas, 1—remittent fever, 2—scarlet fever, 10—typhoid fever, 1—disease of the heart, 7—infantile disease, 1—disease of the kidneys, 2—congestion of the lungs, 1—inflammation of the lungs, 7—marasmus, 3—measles, 1—cerebro-spinal meningitis, 1—mortification, 1—old age, 4—paralysis, 2—peritonitis, 2—puerperal disease, 3—scrofula, 1—stone in the bladder, 1—syphilis, 1—trismus nascentium, 1—unknown, 9—dysentery, 1.

Under 5 years of age, 46—between 5 and 20 years, 10—between 20 and 40 years, 26—between 40 and 60 years, 15—above 60 years, 14. Born in the United States, 79—Ireland, 21—other places, 11.